

Fifth Annual Washington Energy Policy Conference
*"Regulatory Perspective on Fundamental
Changes in the Energy Industry"*

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I. Introductory Remarks

Good morning. It is indeed a pleasure to address this conference. During the course of the day you will explore some very interesting and vital topics. A good understanding the new energy paradigm, by both policy makers and business practitioners, is of critical importance to our economy.

I was asked to provide a regulatory perspective on fundamental changes in the energy industry. As I looked over the topics on today's program, I was struck by how many of them are playing an important role in the energy markets that my Commission regulates. Regulatory policy must respond quickly and wisely to convergence, to mergers, and to technology changes if American consumers are to benefit.

Just in case some of you may not be aware of what the Federal Energy Regulatory Commission is, let me provide just a little background. We have jurisdiction over the prices and other terms of interstate transportation of natural gas, interstate transmission of electricity, and wholesale sales of electricity. In the U.S., the combined annual revenues of the natural gas and electric industries exceed \$260 billion a year. These are large backbone industries for the U.S. economy. And they have undergone a profound shift toward competitive markets in the last decade.

In my time here this morning, I would like to discuss the interplay of this shift and the FERC's changing regulatory policies. Specifically, I would like to compare the major concerns of regulatory policy in the old world with those in the new. This will highlight the regulatory reform response to the paradigm shift, and in so doing, also highlight its promises and challenges.

II. From the Old World to the New

Let me first address the old world. It was a fairly simple world of regulated monopoly and little or no consumer choice. Electricity markets in the U.S. consisted of franchise service territories served by vertically integrated monopolists. The organization was based on the premise that all three stages of production were natural monopolies and that it was most efficient for just one seller to serve a market. Wholesale customers had few choices because transmission service to reach a new supplier was generally unavailable. Gas markets were little better. Local distributors usually purchased both the gas commodity and the transportation service as a bundled product from a single pipeline.

Regulation was also more simple. The regulators' objective was controlling the market power of individual firms. This was accomplished by requiring a service obligation of the firms and then setting their rates to recover costs plus a fair rate of return. Our major areas of concern were measuring and forecasting costs, allocating costs to customer groups based as much on politics as economics, and awarding a "fair" return on equity capital – mostly an act of wizardry. Little attention was paid to incentives for productive efficiency or lowering costs and there was little reason to pay much attention to good price signals.

This paradigm changed in the 1980s and 90s, and the change was primarily due to four factors: poor performance by the monopolists, technological change, the phenomenon of energy restructuring worldwide, and new found respect for the elegantly simple concept of customer choice. In electricity, some utilities did not adjust in time to the decrease in demand brought about by higher prices and built too much capacity at too high a cost. Gas pipelines entered long term gas contracts at high prices. Customers did not want to pay the high costs and wanted access to lower cost suppliers. They brought to bear political pressure to see that it happened. The concept of choice began to resonate in the energy area as it had in other businesses, such as long distance telephone, and U.S. policy makers began to pay

attention to energy restructuring efforts overseas, in countries such as England and Chile.

Technological improvements were also catalysts for change. The advancement of small scale electricity generators, combined cycle gas facilities in particular, and improved transmission technology over long distances meant that electricity markets could be broader than the local franchise. New generation could be brought on line for one-half or even one-third the cost of old generation. Generation no longer seemed to be a natural monopoly. Meanwhile, along the way, by enacting PURPA, by deregulating the price of gas supplies, and by passing legislation spurring IPP development and open access on the grid, Congress tipped its hat to the pro-competitive evolution.

III. Regulatory Concerns in the New World

In contrast, today's wholesale electricity and natural gas markets are increasingly competitive, due in no small part to FERC policies that have pried open the interstate delivery systems. The gas and electric industries are strikingly similar in the regulatory challenges they pose. In both industries, the basic commodities can be traded in competitive wholesale markets. They are not characterized by natural monopoly. The Commission's philosophy now is that natural gas and electricity can best be supplied through competitive markets; that competition can discipline commodity prices better than regulation; and that competition unleashes the creative energies of market participants to develop the innovative products and services their customers want.

While this is true, deregulation of the energy commodity does not mean that regulators can simply pack up their bags and go home. Occasionally at conferences such as this one, someone will say, "Regulators should just get out of the way and let the markets work." I puzzle over this. There is no competition and there are no markets unless the commodity can be delivered over an open and nondiscriminatory network of pipelines and wires. Markets do not simply spring magically and effortlessly into existence after 100 years of monopoly regulation just because regulators get out of the way. Markets must be nourished by regulatory policies that first pry the transportation networks open, and then keep them open. Gas and electricity transportation occurs over highly integrated interstate networks that still exhibit natural monopoly characteristics and thus must be appropriately regulated.

Access to these networks and efficient operation of the networks are critical to robust commodity markets, but present complex technical and policy issues. Consequently, a good deal of our regulatory attention is now focused on the transportation network.

So the regulator's job, at least at the Federal level, is no longer focused on setting rates for individual firms. We now focus on markets; specifically ensuring a good framework for vibrant competitive markets. To drive home this point of how different the regulatory job is now, I would like to describe for you five major components of FERC policy for fostering vibrant markets.

Component #1: Markets without artificial boundaries

Component number one is the pursuit of large wholesale markets without artificial boundaries. Given the critical role of the transportation network, we must ensure that its organization and operation do not unnecessarily restrict the geographic scope of markets. I am pleased that there is now a highly competitive North American market for natural gas facilitated by an open interstate pipeline system. The old electricity regime had resulted in individual utilities owning and operating small portions of the interstate grid. Investment and operating decisions were made on a company basis and each utility charged a separate rate to cross its system. This system balkanizes the grid and restricts the scope of power markets. Any artificial limitation on the geographic scope of markets limits the number of commodity sellers, raises prices, and lowers consumer welfare.

The FERC is committed to eliminating such impediments. We recently finalized a rule aimed at ensuring that all electric transmission providers are participating in an appropriately sized and configured regional transmission organization, or RTO, with efficient pricing across the entire region. The physics of the electricity grid does not respect state or corporate boundaries. Its planning, operation, and pricing must be performed on a much larger regional basis. The FERC's RTO policy is intended to eliminate the existing balkanization that artificially restricts the size of the electricity trading market.

Component #2: Fair Access to the Transportation Network

Component number two is fair access to the transportation network. It is elementary that sellers and buyers in a market should have good access to each other. That is the basis of efficient exchange. However, the electricity grid in most of the U.S. is still operated by companies that also own generation assets, and this presents a powerful conflict of interest in allowing access to the grid. The answer is obvious: control of the grid must be separated from those who have merchant interests in electricity markets. Order No. 888 took an important step in this direction, but now more must be done. The ISO model, the independent transmission company model, or some hybrid institution, are all possibilities for grid management institutions that can guarantee equality of access to the grid, with no self dealing.

In gas markets, complaints of pipeline self-dealing seem to arise less frequently, probably because the pipeline industry is not vertically integrated. Nevertheless, the Commission has strict rules for marketing affiliates of pipelines. Equal access to necessary transportation facilities for all shippers, large or small, will remain a key focus of regulatory policy for pipelines.

Equal access also means the right to interconnect to the pipeline or electric grid without discrimination and without unnecessary legerdemain. We recently adopted a new policy that will facilitate the interconnection of generators to the electric grid. Generators will now be able to interconnect using the same time limited and fair processes we have prescribed for transmission access. We should also promote the concept of the standardized interconnection agreement. In addition, it is my hope that the Commission will soon adopt a more aggressive interconnection policy for natural gas pipelines that will facilitate interconnections with customers and other pipelines.

Clearly, access across these interstate transportation networks requires, in the first instance, the right to interconnect on reasonable terms and conditions.

Component #3: Efficient pricing for Transportation Services

The third critical component of our regulatory policy is efficient pricing policies for transportation services. Poor pricing will result in poor expansion and usage decisions and distort market signals. Because the transportation networks are still regulated monopolies, attention must be given to pricing transportation services.

But this does not mean we can just continue the same pricing designs of the old world. The old transmission pricing regimes were sufficient for their time because resource location decisions did not depend on them. Resource location decisions were made by a monopolist. Now, the decisions of many market players are critically affected by transportation prices. We must take great care in their design.

Efficient prices must signal operators and users about the consequences of their decisions on network use. This is important not only to short-term network operation but also to the need for, and location of, new transportation facilities to eliminate bottlenecks; and, in the electric industry, it is important in determining the need for, and location of, new generating resources.

In addition to signaling the need for expansions, a good pricing policy must also ensure that network operators are compensated for the risks of developing new facilities. Are electric transmission facilities more or less risky in a transmission only business when compared to the old vertically integrated utility? Do volatile generation markets and new distributed generation technology make the stand alone transmission business more risky than it has been? The Commission must grapple with these issues.

Finally, the cost-plus approach to rate design will not do in the new world, because it provides no incentive for good performance. I believe that performance based rates hold great promise for attaining our pricing objectives for transmission services. However, I am not naive about the difficulties that must be overcome in developing good performance based rates. Those difficulties include: clearly defining the objectives, or targets, that will determine rewards or penalties; determining the form and amount of the incentive rewards or penalties; designing a system for measuring performance; and ensuring that we have the necessary data for good decisionmaking.

I believe the widespread formation of Regional Transmission Organizations also holds great promise for making progress on pricing reform for electric transmission. Because electricity transmission management is regional in nature, it naturally follows that the pricing regime should be regional in scope. Clearly, the balkanized nature of grid operation and vertical integration have held back good pricing reform.

With respect to pricing for pipeline capacity, the Commission has recently issued a final rule that may provide further rationalization of the pricing for natural gas transportation. Among the pricing reforms we adopted in Order No. 637 is the removal of the cost-of-service price cap for short-term secondary market transactions. The theory is that, in the secondary market, capacity would be sold to those who value it the most. Our rule also allows pipelines to propose rates that vary according to the season, again for the purpose of matching price and value during peak periods.

Efficient operation, fair access to the pipeline and electric grids, and efficient pricing, are of critical importance. But these objectives raise many complex technical, legal, and policy issues – far more than were raised in the old world. I think it is fair to say that working toward these objectives is a long term problem.

Component #4: Efficient Trading Practices and Monitoring

Component number four is that we must nurture the markets and promote efficient trading practices. There also must be some monitoring of the new markets to ensure that market power has been weeded out. Some observers are under the impression that markets can be left alone, literally ignored by policy makers. I disagree. The gas and electric industries are just now emerging from almost a century of heavily regulated strong monopoly. Effective trading institutions and practices must be developed. The structure of these new markets cannot be ignored if competition is to flourish.

I think there are three basic attributes to good trading practices. One of them is organization. Markets can vary in the degree to which they are organized and still provide a fairly effective trading medium, but common terms of trade, such as standard products and contract conditions are important. A second attribute of an efficient trading regime is transparency of price. Players must know the prices at which transactions occur in order to adjust their operations. And the third basic attribute is appropriate hedging instruments. Hedging instruments, such as futures contracts, are critical to industries such as gas and electricity that exhibit price volatility during certain periods.

The old monopoly markets did not require good trading practices. Trade was fairly limited in that old world. While good trading institutions are important, the

FERC is primarily relying on private industry to develop them. In electricity, I believe the regional transmission organizations will provide an excellent venue for organized trade. In the gas markets, I would note that there are now more than 40 hubs in the U.S. where interstate pipelines intersect, facilitating markets for both commodity and capacity transactions and a new array of market-responsive products and services. These gas hubs nourish more vibrant competition and more choices for shippers.

These new markets will require some degree of monitoring, either by the Commission or by neutral entities. The complexity of network operation on the electric grid in particular, lends itself to gaming, such as creating artificial congestion. And the complex bidding rules required for some of the short term markets may also be gamed to create market power. Monitoring will help ensure against these abuses. And disputes among market participants will still need to be sorted out, sometimes in a public forum.

A regulatory presence thus is still needed to help instill a sense of trust and legitimacy in the markets that can be respected by traders and investors. Investors in particular need reasonable and transparent market rules so that they can invest with confidence. The tasks associated with nourishing a good market structure and monitoring for market power abuse are far different from the traditional rate case disputes regulators dealt with in the old world.

Component #5: Ensure that Industry Consolidation does not Choke Competition

Component number five is to ensure that the massive industry consolidation underway now does not choke the very competition we are trying to nourish. We are seeing a dramatic restructuring of our energy industries, especially the electric power industry. Generation is being divested by some vertically integrated utilities. Generally this is good for markets. Divestiture helps lower market concentration, increasing competitive pressure, and often means more efficient operation of the plants. Divestiture also separates transmission control from generation owners, which helps to eliminate discrimination on the grid.

But, at the same time, we are also seeing unprecedented industry consolidation. Pipeline conglomerates are being formed, traditional electric utilities are merging with each other, utilities are buying marketers and independent power

producers, and vice versa. FERC has jurisdiction over mergers involving electric assets, and we are under increasing pressure to process mergers quickly to allow for timely business decisions. But we must balance that pressure with tough but fair analyses of the competitive effects, both horizontal and vertical, of proposed mergers. While mergers can produce efficiencies, we must cast a wary eye to ensure they do not choke off the competition that is just now beginning to take hold in electricity markets.

How might a merger choke competition? First, by consolidating ownership of generation assets in a market, a merger may create both the ability and incentive for the newly merged entity to withhold generation and drive up prices. This is classic horizontal market power. Secondly, a merger may exacerbate vertical market power – that is, the ability and incentive of the newly merged firm to use its control over one line of business to favor another line of business. In the AEP-CSW merger, the concern was that the merger created an incentive for the merged firm to dispatch generation in a way that would create transmission bottlenecks and frustrate competition in wholesale generation markets. In the merger of CNG, a natural gas pipeline, with Dominion Resources, an electric utility, the vertical market power concern was that the merged firm would have an incentive to operate its pipeline assets to discriminate against the gas-fired generation owned by others, thereby favoring its own generation.

The Commission does not question the wisdom of a merger from a business perspective. We make no judgment whether a merger will enhance shareholder value. We focus almost exclusively on whether a proposed merger is inconsistent with our broader pro-competitive goals.

I believe that this is important work. At the risk of repetition, let me underscore my view that one cannot claim to believe in competition and remain agnostic about market structure. And mergers can dramatically change the structure of energy markets.

IV. Concluding Remarks

In summary and conclusion, the paradigm change has deeply affected gas and electricity markets and has changed our regulatory mission. Our focus now at the Commission is on fostering vibrant competitive markets for commodities through

network access, operation, and pricing, as well as improved trading. I believe these developments show great promise for improving efficiency and benefitting consumers.

There are, however, a number of constraints on the evolution to competition in energy markets. The most obvious one is that competition in end use markets for natural gas and electricity is controlled by the states, and for any number of reasons many states have not embraced competition. Nevertheless, I am convinced that over time customer choice will sweep the country and change state policy, probably fueled by an electronic market over the Internet. When this occurs, it will depend fundamentally on an efficient and open national network of pipelines and wires to which all suppliers and customers have equal access. And this open National network may ultimately be the enduring legacy of the Federal Energy Regulatory Commission.

Thank you.